

UBD Title or Topic

Subject/Course: Culinary Math

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Grade (s): 9-12

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Stage 1: Desired Results

Core Standard(s):

1 PS 7.1 Use math skills to carry out daily operations of a food service business.

1 PS 7.2 Utilize math skills to control food service costs.

Understandings: Students will understand that....

the application of math skills is essential in a successful food service operation.

Essential Question(s):

What math skills are essential in food service?

What is the connection between math skills and success in food service operations?

Students will know....

Basic measurements and equivalents.

Basic math operations – add, subtract, multiply and divide.

How to use fractions, decimals, whole numbers, and percents in basic math operations.

Know how to control food costs.

Student will be able to

Convert recipe yields.

Calculate as purchased (AP) and edible portion (EP) amounts

Calculate standard recipe cost and cost per serving.

Apply math formulas to control food costs in an operation.

Stage 2: Assessment Evidence

What evidence will show that students understand?

x Performance Task

 Project

x Quizzes

x Tests

x Informal Observations

 Discussions

 Interviews

x Self-Assessment

x Other

Stage 3: Learning Plan

Motivation – Introduce and Explain

How will you help students know *where* they are headed and why? How will you *hook* students through engaging and thought-provoking experiences that point toward big ideas, essential questions, and performance tasks?

Guest Speaker – restaurant/franchise owner discuss business operations to make a restaurant profitable.

Motivational activity - Visual – tear off parts of a dollar to show typical percentage costs of running a restaurant (taxes, food costs, rent/facilities, insurance, marketing, consumables. utilities, labor, profit (4% left)

Model (Teacher presentation):

What instruction is needed to *equip* students for final performance?

Use book as a resource to work through sample problems.

- Changing recipe yield using conversion factor
- Food cost / food cost percentage
- Product yield percentage using EP /AP

Lecture using chapter Powerpoint / overheads on math information.

Guided and Independent Practice (Student Engagement):

What events can students *experience* to make the ideas and issues real? What learning activities will help student to *explore* the big ideas and essential questions?

Worksheet practicing recipe conversion, costing, yield percentage.

Case study from www.ramef.org/spectrum/teacher/folder.2007-08-10.9376155364/file.2007-08-06.9464748295 (also in ProStart workbook)

As part of food lab, have student convert recipe yield (decrease and increase), figure food costs (recipe cost and cost per serving.)

Use www.quia.com/cb/295916.html to review concepts.

How will you cause students to *reflect* and *rethink* to dig deeper into core ideas? How will you guide students in *rehearsing*, *revising*, and *refining* their work based on feedback and self-assessment? How will students *exhibit* their understanding about their final performances and products? How will you guide students in *self-evaluation* to identify the strengths and weaknesses in their work and set future goals?

Quizzes / Tests

Informal observation

Applying information on lab practical (ongoing assessment throughout course)

Classroom Implementation Suggestions

Unit of Instruction and Resources

(Steps of instruction to gain big understandings and answer essential questions)

1. Motivational activity – ripping a \$ to show restaurant costs.
2. Outside speaker to speak about costs in business. (Could even be director of school food service.)
3. Use Powerpoint to cover information in chapter.(www.uen.org/curriculumseach)
4. Guided practice activities. Worksheet from student's text and workbooks.
5. Review with reinforcement activities on www.quia.com
6. Quizzes to assess student understanding.
7. Apply math concepts in lab situations.
8. Test

